

NEWS RELEASE - FOR IMMEDIATE RELEASE

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**G:BOX Chemi XX6 Imager used to Study Effects of Stressors on Bacteria
Research may Contribute to Identifying Targets for New Anti-microbials**

Cambridge, UK: Syngene, a world-leading manufacturer of image analysis solutions, is pleased to announce its G:BOX Chemi XX6 multi-application imager is being utilised by scientists at the University of Warwick to rapidly and accurately analyse how Gram positive bacteria react to stressors. This is providing information on phenotypic changes and may identify potential genetic targets, which could help in developing new anti-microbial therapies for drug-resistant bacteria.

Researchers in the Department of Biomedical Sciences at the University of Warwick are using a G:BOX Chemi XX6 multi-application imaging system to study the changes that occur following exposure to stressors in the model Gram positive bacteria, *Bacillus subtilis* (a close relative of drug-resistant bacteria, such as *Staphylococcus aureus*).

The system is being utilised to detect changes in expression of non-coding RNAs using infra-red Northern blots. It is also being used to monitor levels of expression in live bacteria. The promoter for the RNA or protein encoding gene is cloned with the green fluorescent protein (GFP) marker genes and the G:BOX Chemi XX6 is utilised to image clones expressing the genes of interest both directly from the plate. This fundamental research is allowing the scientists to detect phenotypic changes associated with survival and growth and the information it provides could contribute to identifying therapeutic targets for developing new anti-microbials.

Dr Emma Denham, Assistant Professor of Molecular Bacteriology at the University of Warwick explained: "*B. subtilis* expresses over 1500 non-coding RNAs and we want to determine what they are regulating and how they are doing it. As part of this research we're using a G:BOX Chemi XX6 system to analyse chemiluminescent RNA and proteins, as well as image *B. subtilis* and *E. coli* colonies on 25 cm plates to identify interesting clones."

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BEACON HOUSE,
NUFFIELD ROAD
CAMBRIDGE
CB4 1TF

TEL: 01223 727123

FAX: 01223 727101

E-MAIL: sales@syngene.com

www.syngene.com

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Emma continued: “We chose the G:BOX Chemi XX6 because it is the only analyser we tested that could cope with imaging bacteria on large plates, as well as Northern and Western blots and we haven’t yet found a fluorescence or chemi imaging application the G:BOX Chemi XX6 cannot perform.”

Scientists wanting to find out about the multi-application G:BOX Chemi XX6 imager should click the link for details: <http://www.syngene.com/g-box-chemi-xx6/>

“We’re pleased that the G:BOX Chemi XX6 multi-functional imager is being used in fundamental research which could be key to understanding anti-microbial resistance.” states Dr Martin Biggs, Sales Manager at Syngene, “The work at the University of Warwick with a wide range of chemi blot and even fluorescent bacterial colony imaging applications shows the sheer versatility a G:BOX Chemi XX6 system can offer any life science research laboratory.”

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For Further Information Contact:

Jayne Arthur, Syngene, Beacon House, Nuffield Road, Cambridge, CB4 1TF, UK.
Tel: +44(0) 1223-727123 Fax +44 (0) 1223-727101
Email: jayne.arthur@syngene.com Web: www.syngene.com/g-box-chemi-xx6/
Twitter: @TeamSyngene

Dr Emma L. Denham, Assistant Professor of Molecular Bacteriology, Division of Biomedical Sciences Unit of Microbiology and Infection, Warwick Medical School, University of Warwick, Coventry, CV4 7AL, UK.
Tel: +44 024 76572552 Email: e.l.denham@warwick.ac.uk
Web: www2.warwick.ac.uk/fac/med/research/tsm/microinfect/staff/denhamlab
Twitter: @gingermicrobe

Editor Contact:

Dr Sue Pearson, Director, International Science Writer, PO Box 170, Hitchin, Hertfordshire SG5 3GD, UK.
Tel/Fax: +44 (0) 1462- 635327 Email: sue.pearson@internationalsciencewriter.com
Web: www.internationalsciencewriter.com Twitter: @IScienceWriter

Note to Editors **About Syngene**

Syngene is a world-leading supplier of integrated imaging solutions for analysis and documentation of gel-based information. Syngene’s systems are used by more than 10,000 research organisations and over 50,000 individual scientists world-wide and include many of the world’s top pharmaceutical companies and major research institutes.

Syngene, founded in 1997, is a division of the Synoptics Group of the AIM listed Scientific Digital Imaging Company based in Cambridge, UK. The Group's other divisions, Symbiosis and Synoptics Health, specialise in digital imaging solutions for microbial and healthcare applications respectively. Synoptics, which celebrated its 30th anniversary of being in business in 2015, currently employs 40 people in its UK and subsidiary operation in Frederick, USA.

About the Division of Biomedical Sciences

The Division of Biomedical Sciences is composed of clinically-minded academics (biologists, chemists, engineers, biophysicists and bio-informaticians) and academically-minded clinicians (hospital doctors) who work in collaborative teams across disciplines to understand the molecular basis of human disease and to design clinical treatments and effective point-of-care diagnostic tests for the early detection of today's most pressing medical problems.